

## **Effect of mutations in extracellular nuclease on the characteristics of the pigmented and nonpigmented *Serratia marcescens* strains**

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### **Abstract**

© 2016, Pleiades Publishing, Ltd. Comparative characterization of the pigmented and nonpigmented *Serratia marcescens* strains and their extracellular nuclease mutants was carried out. Biomass accumulation by the mutant strains decreased on average by 20%, while proteolytic activity of the culture liquid was 4–5 times lower than in the case of the wild type strains. The mutants with impaired extracellular nuclease genes exhibited higher sensitivity to reactive oxygen species. Comparative analysis of motility of the strains revealed the highest flagellar activity in the wild type nonpigmented strain, while the cells of its mutant completely lost this feature.

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### **Keywords**

motility, mutants, nuclease, oxidative stress, prodigiosin, protease, *Serratia marcescens*